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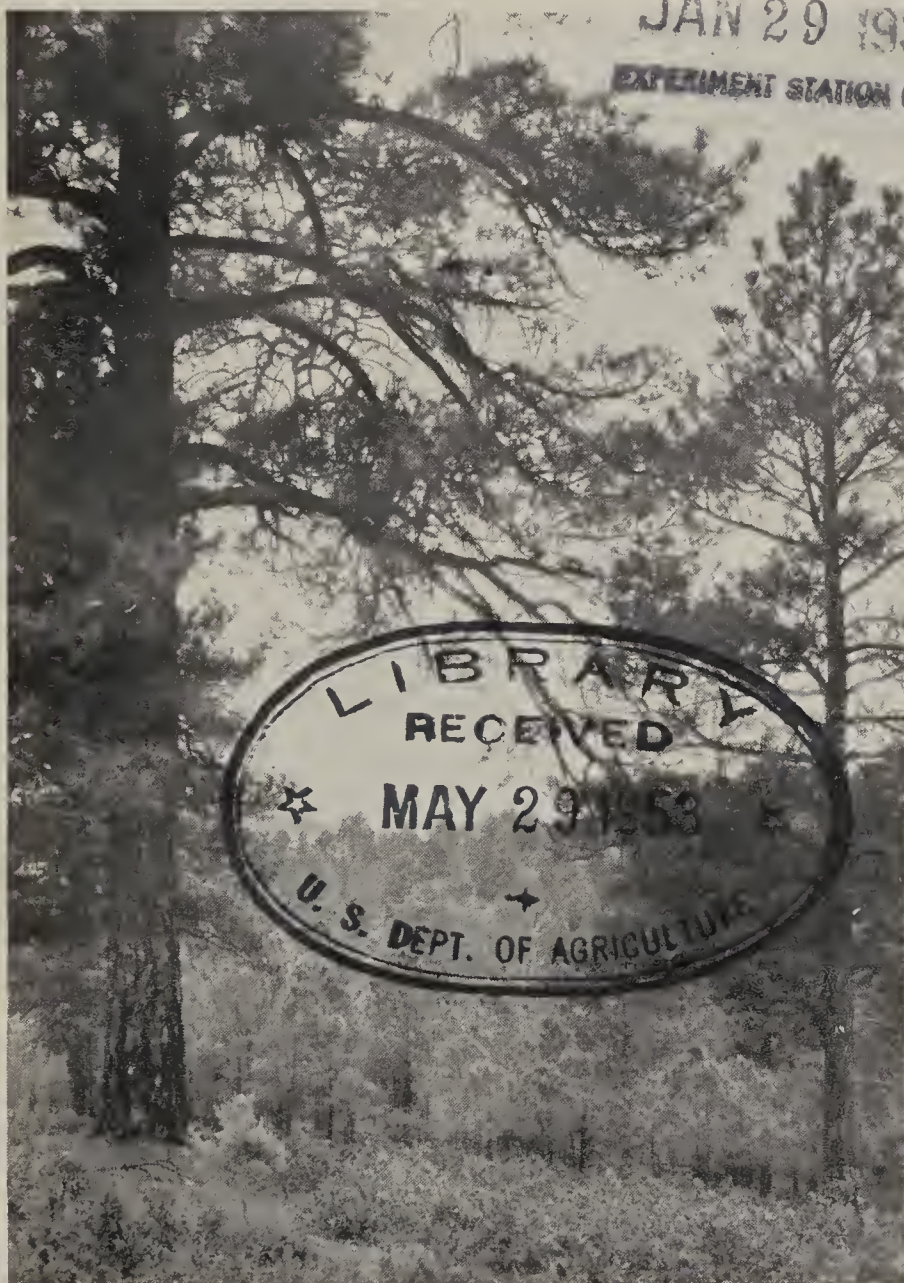
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**THE NATIONAL FORESTS  
OF ARIZONA AND  
NEW MEXICO**

**INFORMATION AND ROAD MAP**

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JAN 29 1935

EXPERIMENT STATION FILE



F-233597

The forest

**UNITED STATES  
DEPARTMENT OF AGRICULTURE**  
U.S. **FOREST SERVICE**  
SOUTHWESTERN REGION



# *The National Forests of Arizona and New Mexico*



## THE SOUTHWEST

The first-time visitor to the Southwest has much to learn and unlearn. The preconceived idea that it is a land of Indians, deserts, and cacti will need a lot of adjustment. It is true that these are found and often intermingled, but not as one commonly imagines. Neither are the so-called "deserts" limitless sand wastes, but rather areas covered with a wealth of strange vegetation and when seen in bloom present a riot of color that is too elusive for adequate description. Nowhere in our country is there to be found a wider range of plant and animal life than here for it reaches from the lower Sonoran Zone to the Arctic, from the mountain buttercup to the giant saguaro, from the Arctic ptarmigan to the Mexican jaguar and javelina. Within this land of unusual contrasts is the



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The desert near Oracle, Ariz., Coronado National Forest

greatest expanse of pure ponderosa pine forest in the world, as well as the world's most renowned canyon and the largest known cavern.

In the Southwestern National Forest Region—Arizona and New Mexico—there are 13 national forests, containing over 19,800,000 acres of Government-owned land, administered by the Regional Forester at Albuquerque, N.Mex. A forest supervisor is in direct charge of each forest, with headquarters in a town conveniently located in relation to the forest. The subdivisions of the forest, known as ranger districts and varying from 200,000 to 400,000 acres in area, are managed by resident forest rangers who are on duty throughout the year. Following is a list of the national forests of the Southwest, together with their headquarters:

### NEW MEXICO

Carson National Forest, Taos, N.Mex.  
Cibola National Forest, Albuquerque, N.Mex.  
Gila National Forest, Silver City, N.Mex.  
Lincoln National Forest, Alamogordo, N.Mex.  
Santa Fe National Forest, Santa Fe, N.Mex.

### ARIZONA

Apache National Forest, Springerville, Ariz.  
Coconino National Forest, Flagstaff, Ariz.  
Coronado National Forest, Tucson, Ariz.  
Crook National Forest, Safford, Ariz.  
Kaibab National Forest, Kanab, Utah.  
Prescott National Forest, Prescott, Ariz.  
Sitgreaves National Forest, Holbrook, Ariz.  
Tonto National Forest, Phoenix, Ariz.

Information regarding the national forests of the Southwest may be had upon application to the forest supervisor of the forest concerned. A folder containing a road map and describing resources and points of interest has been prepared for each forest, and is available free, on request. For information of a general character, write the regional forester at Albuquerque, N.Mex.





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Roads make the forest accessible

## PURPOSES OF THE NATIONAL FORESTS

The national forests are created in order to insure a perpetual supply of timber for homes and industries and to prevent the destruction of forest and vegetative cover which tends to regulate the flow of streams. Their administration provides for the use of their timber, water, forage, wild life, and recreational and other national resources by the public, in a manner that will make their services of the greatest good to the greatest number of people in the long run.







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Watershed at the head of Red River, Carson National Forest

## FOREST RESOURCES

### WATERSHED VALUES

Because of the climatic conditions in the Southwest, water is perhaps the greatest of all the forest resources, and one of the most valuable services rendered by the forests in the Southwestern Region is the protection of the watersheds upon which depend several large irrigation projects and the safeguarding of the municipal water supply of numerous towns. Chief among the irrigation projects affected are the Salt River Valley, Paradise-Verde, and San Carlos-Casa Grande in Arizona, and the Elephant Butte and Rio Grande Conservancy in New Mexico. Phoenix, Flagstaff, Globe, Prescott, Williams, Safford, and Miami, in Arizona, and Santa Fe, Las Vegas, Alamogordo, Silver City, and Magdalena, in New Mexico, are among the cities whose municipal water supply is protected by the national forests.

In the early days of the livestock industry, when grazing was unregulated, some of the

forest ranges were greatly overstocked. As a result, many of the watersheds were overgrazed to such an extent that the grass cover began to disappear rapidly. This overgrazing, together with unregulated cutting of timber under improper logging methods and uncontrolled forest fires, soon became apparent in badly eroded hillside and valleys in certain sections and the rapid run-off of destructive flood waters formerly held back and stored in the soil to a great extent by the luxuriant ground cover. These floods cut deep arroyos where none before existed, caused the silting of irrigation dams and projects, and lessened the efficiency of the water supplies and contaminated them with a burden of silt.

Management plans for timber cropping and grazing on the forests are now made and administered with watershed protection always uppermost and correlated to best serve the use of this valuable water resource.

### RECREATION

The high elevations of the national forests, with their cool temperatures and magnificent scenery, numerous points of interest, and natural advantages for camping, hunting, and fishing, as well as their close proximity to sizable towns and well-settled valleys, make the forests of the Southwestern National Forest Region of outstanding value for recreation.

Camping is free anywhere on the forests, the only restriction being the exercise of care with fire, observance of State and Federal laws, and the ordinary standards of sanitation and neatness.

The use of the Civilian Conservation Corps camps established within the region during 1933 and the Public Works program made possible





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Camping on the Cibola National Forest

the speeding up of a program of improvements on recreational areas which would not have been possible under the regular appropriations. These improvements consisted of the construc-



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An attractive mountain cabin, Santa Fe National Forest



## The National Forests of Arizona and New Mexico



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A virgin ponderosa pine forest, Lincoln National Forest

tion at picnic and campgrounds, of fireplaces, picnic tables, and benches, development of water supply, and fencing of the areas to exclude livestock; the construction and improvement of scenic roads; and the clean-up and protection of roadside strips. All of these improvements are for the use of the public without charge.

In suitable localities, lots have been laid out where, for a small annual rental, mountain cabins can be built. Leases for such sites run for a period of years and may be renewed when the original term expires.

Details with regard to all recreational use of the forests and points of interest in or near them will be furnished by forest supervisors upon request.

### TIMBER

One of the important resources of the Southwestern Forest Region is timber. There are, in

*Eight*

round numbers, about  $7\frac{1}{4}$  million acres of forest land bearing merchantable timber in the national forests of the Southwest, and it is estimated that there is a stand of 25,742,000,000 board feet of saw timber. In addition to the saw-timber stands there is a vast acreage of cordwood, consisting of pinon, juniper, oak, and other woodland species, totaling over 24,000,000 cords.

Timbered lands are of great value for the production of needed timber crops, as watershed cover for the regulation of streamflow, as a home for game, for recreation, and other purposes. Such lands on the national forests are managed to insure these values continuously. Proper timber management, therefore, consists in utilizing these resources without damaging



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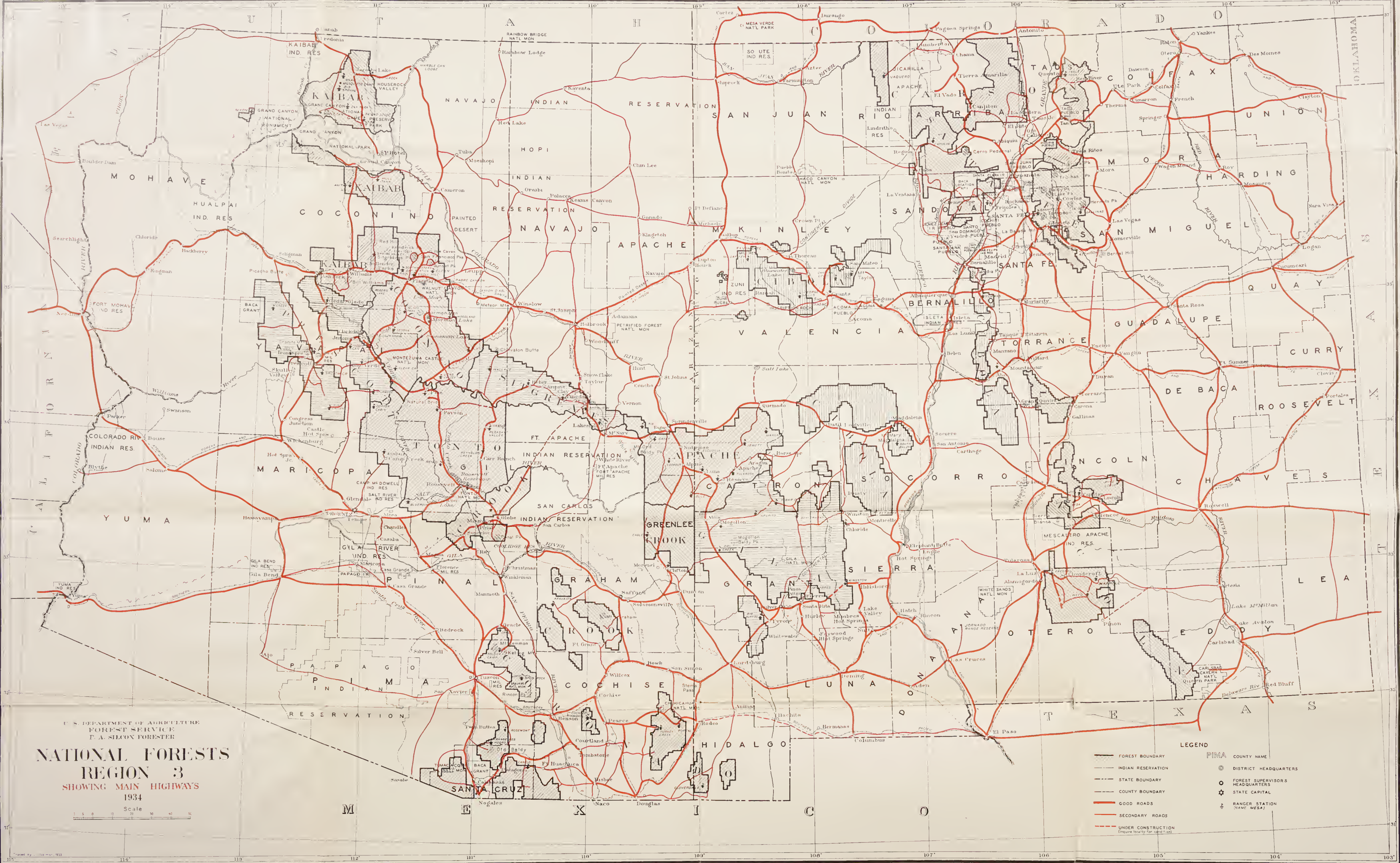
A forest after the mature trees have been harvested, Coconino National Forest

the producing power of the land or crop. A virgin forest is an ever-changing association of trees of all ages, from the tiny seedling to the over-mature and slowly decaying veteran, and

*Nine*

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unless harvested and utilized by man it is harvested and wasted by nature. Timber is sold to meet the needs for forest products and cut in accordance with departmental regulations and management plans. Cutting is allowed at a rate not exceeding the sustained yield of management units. This cutting removes only the ripe timber, leaving a portion of the stand, consisting of the young, fast-growing trees and sufficient larger trees for seed production, to reforest the area and form the basis of another cut within 50 to 70 years. Under this method of management, timber lands produce forest products and meet adequately the demands for watershed cover and other uses. A growing forest contributes its share to community wealth, furnishes employment to labor and capital in the harvest, manufacture, and merchandising of forest products, and contributes to government through taxes upon the manufactured products, mills, and other property.



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Surplus forage should be harvested, Apache National Forest

### FORAGE

Forage for domestic livestock is another one of the productive resources of the Southwestern

*Ten*

Forest Region. All of the national-forest range land suitable for use by domestic livestock is occupied under permit. The permit specifies the conditions under which the ranges may be used, the number of stock that may be grazed, and the period of use during the year. In this manner it is possible to stock the ranges properly and to so regulate their use that the forage crops may be harvested year after year without injury to the vegetative cover. In order that such utilization may be based upon scientific findings, an intensive range survey has been made for each of the national forests of the region, and necessary data has been secured for each range unit, including all of the factors that enter into its proper use. The data thus accumulated has been made the basis for a range management plan for each grazing unit. The principal objects of these plans are to improve the forage and other forest conditions, to maintain the ranges, forests, and watersheds in a constantly productive condition, and to harvest the forage crop annually by grazing the domestic livestock on a sustained yield basis in such a way that it contributes to a stable and profitable livestock business and at the same time insures the permanent productivity of the range. The management of livestock in this manner has tended to stabilize the industry in the Southwest and make the profits from it more certain.

### WILD LIFE

Another important resource and one of their chief attractions is the wild life on the national forests of Arizona and New Mexico. The timbered areas of the forests contain excellent breeding grounds for all wild life common to the two States, and the Forest Service endeavors to protect and perpetuate it as it does the

*Eleven*





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Deer on the Kaibab National Forest

other resources. Scientific data on wild life problems and the habits of wild animals is being accumulated constantly with a view to using the information in the formulation of management plans for this valuable resource.

An abundant supply of deer, wild turkey, squirrels, and lesser game animals is found on most of the forests. Bear, mountain lions, coyotes, bobcats, and other fur-bearing animals are also numerous. Of the birds, there are many quail, dove, and duck, and in some localities prairie chicken, grouse, pheasants, and several other species of game birds are in evidence. Besides these, there are hundreds of species of song and other nongame birds. Several herds of elk and antelope are thriving in various localities within the forests. The hunting of these animals has been prohibited for a number of years by State law, but they have increased in certain areas to such an extent that game departments



of the two States now issue permits for the killing of a limited number each year. Numerous game refuges have been established within the forests of the region, on which the State laws prohibit the killing of any wild life. These refuges serve as breeding grounds where wild life may thrive unmolested and restock adjacent territory.

Excellent fishing streams are found in many of the forests, especially the Santa Fe, Carson, Apache, Gila, and Coconino. Streams and lakes are regularly replenished with stock furnished by the Bureau of Fisheries and State hatcheries.

Prospective visitors expecting to hunt or fish are advised to obtain complete information concerning State game and fish laws and license requirements, which will be furnished upon application to the State game warden at Phoenix, Ariz., or Santa Fe, N.Mex., or by any forest officer. Forest hunters and all recreationists are expected to observe the unwritten laws of sanitation and good sportsmanship as well as the State laws.

### THE FOREST RANGER

A romantic figure in the life of the West during the past quarter of a century has been the lone rider of the mountains and guardian of the vast expanses of wooded green—the forest ranger. He is the man who handles the big conservation job in the field. He puts in long hours fighting fires and working on timber sales, trail and telephone construction, and a variety of other strenuous activities of a similar nature, and he is the man who deals, on the ground, with the users of the national forests, and who represents the Forest Service by personal contact with those who live or travel in his forest district. While in the national forests get in

touch with the rangers. They are intimately acquainted with the geography and the highways and byways of the forest and will gladly give any information with regard to them, as well as to the location of camping places, hunting areas, and fishing streams.

### FOREST FIRES AND THEIR PREVENTION

Forest fires are and always have been a great destructive agency. Many of the forest fires in the past have been caused by campfires left burning or by unextinguished matches or tobacco dropped on the inflammable litter of the forest floor. Such fires are easily preventable, since they are caused by carelessness or disregard of public safety.

During the spring and early summer, or what is known as the normal fire season, fire guards and trail crews are employed in the detection



The guardian of the forest

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and extinguishing of forest fires. Fire-lookout towers are built on prominent peaks and connected by telephone with district ranger's and supervisor's headquarters and manned by a fire

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lookout for the same purpose. Quick response to fire calls is the paramount duty of the entire forest personnel and its construction and maintenance crews. Volunteer and cooperative agencies, which respond as needed, are also interwoven in the general scheme of control, and are of much assistance in fighting fires.



F-178441

A forest fire leaves desolation for many years, Santa Fe National Forest



Do YOUR part in helping to prevent damage to YOUR forests by observing the following:

## **SIX RULES FOR PREVENTION OF FIRE IN THE FORESTS**

1. **MATCHES.**—Be sure your match is out. Break it in two before you throw it away.
2. **TOBACCO.**—Be sure that pipe ashes and cigar or cigarette stubs are dead before throwing them away. Never throw them into brush, leaves, or needles.
3. **MAKING CAMP.**—Before building a fire, scrape away all inflammable material from a spot 5 feet in diameter. Dig a hole in the center and in it build your camp fire. Keep your fire small. Never build it against trees or logs or near brush.
4. **BREAKING CAMP.**—Never break camp until your fire is out—**dead out.**
5. **BRUSH BURNING.**—Never burn slash or brush in windy weather or while there is the slightest danger that the fire will get away.
6. **HOW TO PUT OUT A CAMP FIRE.**—Stir the coals while soaking them with water. Turn small sticks and drench both sides. Wet the ground around the fire. If you can't get water stir in earth and tread it down until packed tight over and around the fire. Be sure the last spark is dead.

If you find a fire burning, endeavor to extinguish it, and should it become too large for you to handle notify the nearest forest officer immediately.

Every camper should carry a serviceable shovel and light ax. These tools are not only useful in preparing a proper camp fire, trenching around the tents, and chopping fuel, but are also of great assistance in combating any forest fires found and in banking your camp fire with earth before leaving camp.



## HOW THE FORESTS BENEFIT

Forests not only furnish lumber and other forest products for public consumption, and economical recreation for thousands of people each year, but they also help in a direct financial way by furnishing employment for thousands of men in local communities each year on forest activities such as sawmills, stock raising, forest improvements, hauling in supplies for campers, and acting as guides and furnishing accommodations for the public. It is estimated that, in addition to purchasing supplies from local merchants, each camper and hunter spends an average of \$5 for gasoline alone in the vicinity in which he camps.

Twenty-five percent of all the proceeds received for national forest products and uses are returned to the county in which they are collected to be used in maintaining roads and schools. An additional 10 percent is used for road building on the national forests, so that



Taos Indian pueblo, Carson National Forest

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35 percent in all of the receipts is returned directly to the benefit of the local national forest communities.

Let's keep our national forests as we do our lawns,  
not as we do our city dumps

## THE PUEBLOS

Primitive Indian pueblos are scattered through the valley of the Rio Grande from Isleta, south of Albuquerque, up to Taos in northern New Mexico. To the west of Albuquerque are found the famous pueblos of Laguna, Acoma, and Zuni. The best known are those at Acoma, Zuni, and Taos. In northern Arizona are the Hopi villages, famous for their annual snake dance, and the picturesque Navajos with their unique hogans and flocks of native sheep which furnish the wool for Navajo rugs. Throughout the Hopi and Navajo region there are many points of archaeological interest. Extensive bibliographies of entertaining reading on the modern pueblos, the cliff and communal-house dwellers of the past, and the history, geography, industries, art, and literature of the southwestern Indians are available at most libraries.

## NATIONAL MONUMENTS

National monuments are "objects of historic or scientific interest", the preservation of which has been provided for by an act of Congress. In Arizona and New Mexico national monuments have been established to preserve ancient cliff dwellings, unusual rock formations, and fantastic lava beds. Within the Coconino National Forest, in Arizona, are the Walnut Canyon, Sunset Crater, and Montezuma Castle National Monuments; in the Coronado National Forest are the Chiricahua, Tumacacori, and Saguaro National Monuments; and in the Tonto National Forest is the Tonto National Monument. In the Cibola National Forest, in New Mexico, is the Gran Quivara National Monument; in the Gila National Forest is the Gila Cliff Dwellings National Monument; and in the Santa Fe National Forest is the Bandelier National Monument.

KEEP THE FORESTS GREEN







